

HALAR/HMWPE Cable

Sizes and Specifications:

Item Number	No. of Strands	Circular Mils	AWG Diameter	Inner Layer Thickness	Outer Layer Thickness	Nominal Diameter	Weight per 1000 ft	DC Resistance at 20° C
#8 HALAR/HMWPE	7	16,510	0.142 in	0.020 in	0.065 in	0.32 in	81 lb	0.652 Ω/Mft
#6 HALAR/HMWPE	7	26,240	0.179 in	0.020 in	0.065 in	0.32 in	116 lb	0.411 Ω/Mft
#4 HALAR/HMWPE	7	41,740	0.225 in	0.020 in	0.065 in	0.32 in	170 lb	0.258 Ω/Mft
#2 HALAR/HMWPE	7	66,360	0.283 in	0.020 in	0.065 in	0.32 in	254 lb	0.162 Ω/Mft

Conductor: The copper conductor shall be Class B stranded, compressed, annealed, uncoated copper in accordance with ASTM B 3 and B 8.

Identification: The cable shall be surface ink printed with: "Conductor Size AWG, CU, Manufacturer, HALAR/HMWPE CATHODIC PROTECTION CABLE."

Test: The completed cable shall be tested in accordance with the requirements of ICEA S-61-402, Part 6.

Typical Applications:

HALAR/HMWPE cable is designed for anode lead wires in a wide range of environments. Due to its dual insulation construction, it can be installed directly in native soils or submerged in fresh, brackish, or salt waters. The cable is ideal for deep anode bed installations where chlorine and hydrogen gases are generated. The HALAR insulation will not become brittle at temperatures down to (-80°F) and will maintain dimensionally stability and dielectric strength at temperature up to 250°F. It is highly resistant to notch propagation.

Scope:

High Molecular Weight Polyethylene jacketed cable designed for use as a direct burial feeder in deep anode ground-bed cathodic protection systems. The cable is ideally suited for use in harsh chemical environments involving brackish water, sour gas, chlorine, acids, alkalis, and petroleum based solvents. The cable is suitable for use at voltage up to 600 volts ac or dc.

Applicable Standards:

- ASTM Specifications B 3, latest edition, for Soft o Annealed Copper Wire
- ASTM Specifications B 8, latest edition, for Concentric-Lay Stranded Copper Wire
- ASTM Specifications D 1248, latest edition, for Polyethylene Plastics Molding and Extrusion Materials.
- ICEA Standard S-61-402/NEMA Standard WC5 for Thermoplastics insulated Wire and Cable.

Insulation:

- The conductor shall be insulated with an extruded layer of natural HALAR ECTFE fluoropolymer as a primary insulation.
- The average thickness shall be 20 mils. The minimum thickness at any point shall be not less than 90% of the specified average thickness. The insulation shall be applied tightly to the conductor and shall be free-stripping.

Jacket

- A black High Molecular Weight Polyethylene jacket having both insulating and jacketing properties shall be extruded over the primary insulation. The jacket, before extrusion, shall comply with the physical and electrical requirements of ASTM Specifications D 1248 for Type 1, Class C, Category 5, Grade E-5 and J-1 material.
- The average jacket thickness shall be 65 mils. The minimum thickness shall be not less than 80% of the specified average thickness.